

Amendments to the Specification:

Please replace the paragraph beginning on page 4, lines 19-26 with the following amended paragraph:

Figures 18A-18B is a block diagram of a multi-mode transmitter in accordance with one embodiment of the present invention;

Figure 19 is a timing diagram illustrating operation of the transmitter of Figures 18A-18B; and

Figures 20A-20B is a block diagram of a multi-mode transmitter in accordance with another embodiment of the invention.

Please replace the paragraph beginning on page 9, lines 23- 28 through page 10, lines 1-4 with the following amended paragraph:

The amplification chain 1220, in an exemplary embodiment, includes three cascaded stages, realized for example using FET devices. The stages are drain modulated and driven in switch mode or, for low-power operation, in “multiplicative” mode, as described more particularly in U.S. Patent Application 09/839,024 (Attorney’s Dkt. No. 110411LDM.US) entitled COMMUNICATIONS SIGNAL AMPLIFIERS HAVING INDEPENDENT POWER CONTROL AND AMPLITUDE MODULATION, filed on April 11, 2001 and incorporated herein by reference. An RF input port 1221 of the amplification chain may be regarded as the phase port, and the drains (or power supply inputs) of the stages may be regarded together as the amplitude port 1223.

Please replace the paragraph beginning on page 16, line 28 through page 17, lines 1-9 with the following amended paragraph:

The transmitter of Figures 18A-18B, like that of Figure 12, is mainly digital, the digital and analog portions being separated by a dashed line. Preferably, the digital portion is realized in the form of a single integrated circuit, for example a CMOS integrated circuit.

The characteristics of the ramping profile achieved in accordance with the present invention allow various power amplifier control signals to be abruptly switched during such low amplitude times without performance degradation. An example of the interaction between ramping and overall control of a non-linear power amplifier in a polar modulation architecture will be described with reference to Figures 18A-18B.

Please replace the paragraph beginning on page 19, lines 2-8 with the following amended paragraph:

Referring to Figures 20A-20B, the same general architecture of Figures 18A-18B, previously described, may be extended to further transmission standards, for example CDMA and variants thereof such as WCDMA, cdma2000, etc. In this embodiment, a small number of additional blocks (as compared to the embodiment of Figures 18A-18B) are needed or desirable for purposes of supporting variants of CDMA (“xCDMA”). These additional blocks include CDMA generator, a non-linear filtering block, a separate sample rate converter, and a switch-mode power supply.

Please replace the paragraph beginning on page 20, lines 1-3 with the following amended paragraph:

Non-linear filtering is described in detail in co-pending application serial number 10/037,870 (Dkt. 111019NLF.US) entitled REDUCTION OF AVERAGE-TO-MINIMUM POWER RATIO IN COMMUNICATIONS SIGNALS, filed on even date herewith and incorporated by reference.

Please replace the paragraph beginning on page 21, lines 10-18 with the following amended paragraph:

Although the message carried by a constant-envelope signal may be conveyed using phase only, the signal may be bursted, i.e., sent in discontinuous bursts, to achieve TDMA

source the "missing" amplitude information. In the present example, therefore, a GMSK ramp generator 2015 is provided. The ramp generator may be realized in conventional fashion or as described in co-pending U.S. Patent Application 09/883,967 (Dkt. 110411QPR.US) entitled HIGH-QUALITY POWER RAMPING IN A COMMUNICATIONS TRANSMITTER, filed on even date herewith and incorporated herein by reference.